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WU, QING YUAN				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/774,297

Applicant(s)

CHICHKOV ET AL.

Examiner

Qing-Yuan Wu

Art Unit

2194

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 July 2005.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-29 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 06 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-8508)
Paper No(s)/Mail Date 7/1/05
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

1. Claims 1-29 are presented for examination.
2. Claim 29 is being treated under 35 USC 112 sixth paragraph, in which the “means for” operating, processing, and translating required execution by a processor of mobile computing arrangement supported by applicant’s specification [pgs. 13-14, paragraphs 46-47; pg. 15, paragraph 53], therefore no 35 U.S.C. 101 rejection is warranted.

Specification

3. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The specification failed to provide proper antecedent basis for the limitation “computer-readable medium” recited in claims 15-24.
4. The disclosure is objected to because of the following informalities:
 - a. “The abstract primitive factory 312” should read --The concrete primitive factory 314-- [pg. 10, paragraph 35, line 20].
 - b. “the abstract primitive 414” should read --the abstract primitive 416-- [pg. 11, paragraph 37, lines 13-15].
 - c. “the abstract interface 404” should read --the abstract primitive 416-- [pg. 11, paragraph 38, line 26].Appropriate correction is required.

Claim Objections

5. Claims 3-5 and 10-12 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. More specifically, the limitations recited failed to further limit any of the steps recited in the corresponding parent claims.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claim 29 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

8. Claim elements "means for operating/processing/translating" are means (or step) plus function limitations that invoke 35 U.S.C. 112, sixth paragraph. However, the written description fails to clearly link or associate the disclosed structure, material, or acts to the claimed functions such that one of ordinary skill in the art would recognize what structure, material, or acts perform the claimed functions. As disclosed in applicant's specification, each of the functions of "operating", "processing" and "translating" can be performed by a combination of hardware and software, such as software modules 606-610 stored in memory 604 executed by

processing unit 602 [Fig. 6], however, the specification failed to clearly link or associated which particular hardware/software combination perform the claimed functions. For examination purposes, the limitation “means for operating/processing/translating” are treated as any combination of software and hardware capable of performing the function.

Applicant is required to:

- (a) Amend the claim so that the claim limitation will no longer be a means (or step) plus function limitation under 35 U.S.C. 112, sixth paragraph; or
- (b) Amend the written description of the specification such that it clearly links or associates the corresponding structure, material, or acts to the claimed function without introducing any new matter (35 U.S.C. 132(a)); or
- (c) State on the record where the corresponding structure, material, or acts are set forth in the written description of the specification that perform the claimed function. For more information, see 37 CFR 1.75(d) and MPEP §§ 608.01(o) and 2181.

Claim Rejections - 35 USC § 101

9. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

10. Claims 15-24 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

11. Claim 15 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. More specifically, the claim is not limited to statutory embodiments. In view of Applicant's disclosure [pgs. 15-16, paragraphs 54-55], the computer-readable medium is not limited to statutory embodiments (since both computer-usable and transmitting media are readable by a computer they are jointly refer to as computer-readable medium in the current office action, see specification objection above with respect to providing proper antecedent support for claim limitation), instead being defined as including both statutory embodiments (e.g. computer-usable media such as magnetic or optical media) and non-statutory embodiments (e.g. transmitting media such as carrier waves and various transmission media). More specifically, instructions embodied in transmitting media such as carrier waves, and various wired or wireless media are transient in nature and cannot be manufactured. Hence, instructions stored on such transmitting media, are not statutory. The Examiner suggests rephrasing the specification and clearly distinguishes the storage media (statutory subject matter) and transmitting or non-recordable media, subsequently claiming only the statutory subject matter to overcome the rejection. Claim 20 exhibits the same deficiencies as claim 15 above and is rejected for the same reason. Claims 16-19 and 21-24 are rejected for failing to cure the deficiencies of their corresponding parent claims. See MPEP 2163.07 and 2106 (IV)(B).

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill

in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 1-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jensen et al. (hereafter Jensen) (U.S. Patent 7,444,386), and further in view of Applicant Admitted Prior Art (hereafter AAPA).

14. As to claim 8, Jensen teaches the invention substantially as claimed including a processor-based method for communicating between client device software of a client device and provisioning application [col. 4, lines 37-40], comprising:

providing a communications module that facilitates communications between the client device software and provisioning application [one of a plurality of provisioning adapters facilitating communication, col. 4, lines 37-40];

invoking from the client device software a specific function targeted for the communications module in response to a hardware event [user interacting with client device causing client device software to invoke a function on provisioning server via one of the plurality of provisioning adapters, col. 4, line 58-col. 5, line 16];

transforming the specific function to a generic function of the communications module [translating client device specific commands to function/service/method invocation specified in provisioning API of a generic provisioning application, col. 5, lines 4-16 and 28-39]; and

invoking a method of the provisioning application via the generic function of the communications module [client device software calling method of provisioning application via one of the plurality of provisioning adapters translating device specific commands to generic function/service/method call, col. 6, lines 27-32; col. 7, lines 41-66].

15. Jensen does not specifically teach communication between cellular modem software and application engine software and both software running concurrently on a communications device. However, AAPA teaches communication between cellular modem software and application engine software wherein both software running concurrently on a communications device [pgs. 1-2, paragraph 4].

16. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have modify AAPA with Jensen because both AAPA and Jensen are analogous art that are directed to the same field of endeavor for addressing the need of abstracting communication between device specific software and high level software [col. 2, lines 13-37; AAPA, pgs. 1-2, paragraph 4] and one of ordinary skill in the art would be motivated to modified AAPA with Jensen's abstraction layer (API) to address the problem of an inflexible communication architecture where updates to one of the communicating entity required changes to another communicating entity to create a flexibility communication architecture where such requirement is eliminated [Jensen, col. 2, lines 19-31; AAPA, pgs. 2-3, paragraph 7].

17. As to claim 9, Jensen as modified teaches the invention substantially as claimed including further comprising:

sending in response to the method of the application engine software a generic reply of the communications module targeted for the cellular modem software;

transforming the generic reply to a specific reply of the cellular modem software; and
sending the specific reply to the cellular modem software [translating generic reply from generic provisioning application to a reply specific to the client device to the client device software, Jensen, col. 5, lines 17-39; col. 7, line 61-col. 8, line 5; AAPA, pgs. 1-2, paragraph 4 for communication between cellular modem software and application engine software].

18. As to claim 10, Jensen as modified teaches the invention substantially as claimed including wherein the communications module comprises a telephony module [AAPA, pgs. 2-3, paragraph 7].

19. As to claim 11, Jensen as modified teaches the invention substantially as claimed including wherein the application engine software includes the Symbian operating system [AAPA, pg. 2, paragraph 4, lines 4-6].

20. As to claim 12, Jensen as modified teaches the invention substantially as claimed including wherein the communications module comprises a Telephony Server Module (TSY) compatible with the Symbian ETEL [AAPA, pg. 2, paragraphs 5-6].

21. As to claim 13, Jensen as modified teaches the invention substantially as claimed including wherein invoking from the cellular modem software the specific function comprises forming the specific function from one or more concrete primitives associated with the cellular modem software [a function call or service invocation or transaction is form from a request

and/or reply primitive(s), Jensen, col. 6, line 46-col. 7, line 13; AAPA, pgs. 1-2, paragraph 4 for communication between cellular modem software and application engine software].

22. As to claim 14, Jensen as modified teaches the invention substantially as claimed including wherein the concrete primitives inherit characteristics from one or more abstract primitives, and wherein transforming the specific function to the generic function of the communications module comprises forming the generic function from the one or more abstract primitives [capability of translating implies inheritance and a function call received or service invoked or transaction is form from a request and/or reply primitives, Jensen, col. 6, line 46-col. 7, line 13; AAPA, pgs. 1-2, paragraph 4 for communication between cellular modem software and application engine software](note: since the limitation “inheritance” is not defined and merely disclosed as the concept used in translating the primitives, the capability to translate is believed to satisfy the limitation).

23. As to claims 20-24, these are computing-readable medium claim configured with instructions for causing a processor to perform the method as recited in claims 8, 10 and 12-14, therefore they are rejected for the same reason as method claims 8, 10 and 12-14 set forth above.

24. As to claim 1, this claim is rejected for the same reason as claim 8 above. In addition, Jensen teaches the invention substantially as claimed including:

invoking from the communications module a generic function in response to a service request from the application engine software;

transforming the generic function to a specific function of the cellular modem software;
and

invoking the specific function of the cellular modem software [provisioning application invoking method of client device software via one of a plurality of provisioning adapters which translates provisioning application commands to client device specific function/service/method invocation, Jensen, col. 5, lines 17-27; col. 8, line 61-col. 9, line 6; AAPA, pgs. 1-2, paragraph 4 for communication between cellular modem software and application engine software].

25. As to claim 2, Jensen teaches the invention substantially as claimed including further comprising:

sending a specific reply of the cellular modem software targeted for the communications module in response to the specific function;

transforming the specific reply to a generic reply; and

sending the generic reply to the communications module [translating specific reply from the client device software in the client device to generic provisioning application reply, Jensen, col. 5, lines 4-16 and 28-39; col. 8, line 61-col. 9, line 6; AAPA, pgs. 1-2, paragraph 4 for communication between cellular modem software and application engine software].

26. As to claims 3-5, these claims are rejected for the same reason as claims 10-12 above.

27. As to claim 6, Jensen teaches the invention substantially as claimed including wherein invoking from the communications module the generic function comprises forming one or more

abstract primitives based on the generic function [a function call received or service invoked or transaction is form from a request and/or reply primitive(s), Jensen, col. 6, line 46-col. 7, line 13; AAPA, pgs. 1-2, paragraph 4 for communication between cellular modem software and application engine software].

28. As to claim 7, Jensen teaches the invention substantially as claimed including wherein transforming the generic function to the specific function of the cellular modem software comprises forming one or more concrete primitives that inherit characteristics from the one or more abstract primitives to form the specific function [capability of translating implies inheritance and a function call or service invocation or transaction is form from a request and/or reply primitive(s), Jensen, col. 6, line 46-col. 7, line 13; AAPA, pgs. 1-2, paragraph 4 for communication between cellular modem software and application engine software] (note: since the limitation “inheritance” is not defined and merely disclosed as the concept used in translating the primitives, the capability to translate is believed to satisfy the limitation).

29. As to claims 15-19, these are computing-readable medium claim configured with instructions for causing one or more processors to perform the method as recited in claims 1, 3 and 5-7, therefore they are rejected for the same reason as method claims 1, 3 and 5-7 set forth above.

30. As to claim 25, this claim is rejected for the same reason as claims 1 and 8 above. In addition, Jensen teaches the invention substantially as claimed including a data terminal comprising:

a memory storing a communications module; and

one or more processors coupled to the memory and operable by cellular modem software and application engine software, the processors operable to exchange data between the cellular modem software and the application engine software by [provisioning server can be embodied on a computer, memory and processor(s) are inherent features of a computer, Jensen, col. 4, lines 47-49; AIPA, pgs. 1-2, paragraph 4 for communication between cellular modem software and application engine software],

processing communications between the communications module and the application engine software [Jensen, col. 4, line 58-col. 5, line 16];

processing generic functions of the communications module to communicate with the communications module [Jensen, col. 5, lines 17-27; col. 8, line 61-col. 9, line 6];

processing specific functions of the cellular modem software to communicate with the cellular modem software [Jensen, col. 4, line 58-col. 5, line 16]; and

translating between generic functions of the communications module and specific functions of the cellular modem software to facilitate communications therebetween [Jensen, col. 5, lines 4-39; AIPA, pgs. 1-2, paragraph 4 for communication between cellular modem software and application engine software].

31. As to claims 26-28, these claims are rejected for the same reason as claims 10 and 12-14 above.

32. As to claim 29, this claim is rejected for the same reason as claim 25 above.

Conclusion

33. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Patent 7,047,526 to Wheeler et al., US Patent 6,865,733 to Broussard, US Patent 7,370,335 to White et al., US Patents 6,732,365 and 6,516,356 to Belknap et al., and US PG Publication 2003/0188043 to Woodall et al. teach abstraction layers for converting generic codes/commands/requests to and/or from a specific codes/commands/requests.

34. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Qing-Yuan Wu whose telephone number is (571)272-3776. The examiner can normally be reached on 8:30am-6:00pm Monday-Thursday and alternate Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng Ai An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

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/Qing-Yuan Wu/
Examiner, Art Unit 2194